

AUG 17 2006

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 20 of 33

REMARKS

Claims 1, 3-12, 14-18, 20-22 and 24-36 were pending prior to this paper.

In this paper, the Applicant has amended claims 1, 3-11, 18, 20-22 and 24-36 and has added new claims 37 and 38. These amendments and new claims are submitted to be completely supported by the application as originally filed and to add no new matter.

Informalities objections

The Examiner has raised informalities objections to previously pending claims 1, 3, 6, 8-11, 18, 25, 27, 30 and 33-36. The Applicant has amended claims 1, 3, 6, 8-11, 18, 25, 27, 30 and 33-36 as described in more particular detail below and submits that these amendments obviate the informalities objections raised by the Examiner.

- Claim 1 has been amended (at lines 33-35) to replace "each of said sub-streams carries the cells that are routed to it by the first demultiplexer at a rate" with --each of said *N* sub-streams has a sub-stream rate--.
- Claim 3 has been amended to replace:
 - (i) "Apparatus" with --An apparatus-- (at line 1); and
 - (ii) "one or more serial connections" with --one of the first serial connections-- (at lines 8 and 9).
- Claim 6 has been amended to replace:
 - (i) "wherein the first receive interface comprises a buffer associated with each of the deserializer devices, each of the buffers of a capacity sufficient to hold a plurality of cells" (lines 49-52) with --a plurality of buffers, each of the buffers connected to accept the receive cells from a corresponding one of the deserializer devices and each of the buffers having a capacity sufficient to hold a plurality of the receive cells-- (lines 40-44);
 - (ii) "a buffer" with --any one of the buffers" (at lines 54 and 55); and
 - (iii) "a receiver" with --the receiver-- (at lines 18 and 19 and at lines 59 and 60).
- Claim 8 has been amended (at lines 18 and 19 and at line 34) to replace "a receiver" with --the receiver--.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 21 of 33

- Claim 9 has been amended to replace:
 - (i) "a plurality of deserializer devices for receiving a the serial data in each of the channels" with —a plurality of deserializer devices, each of the deserializer devices connected to a corresponding one of the data connections for receiving the transmit cells of the corresponding one of the N transmit channels after transmission of the transmit cells of the corresponding one of the N transmit channels from the line card to the second card over the mid-plane— (at lines 5-12); and
 - (ii) "a sequence of arrival of cells" with —a sequence of arrival of the transmit cells— (at line 19).
- Claim 10 has been amended:
 - (i) to delete "the second receive interface comprises a buffer associated with each of the deserializer devices, each buffer of a capacity sufficient to hold a plurality of cells, wherein" (at lines 1-4);
 - (ii) to replace "a buffer" with —any one of the buffers— (at lines 6-7); and
 - (iii) to replace "a remaining capacity" with —the remaining capacity— (at line 15).
- Claim 11 has been amended to replace:
 - (i) "for each channel, a serializer device connected to receive the cells of the channel" with —a plurality of second serializer devices, each second serializer device connected to receive the second cells of a corresponding one of the N second channels— (at line 80-84); and
 - (ii) "one or more serial data connections" with —the one or more second serial data connections— (at lines 85 and 86).
- Claim 18 has been amended in a number of locations to more particularly recite the bidirectional interface and its features.
- Claim 25 has been amended (at lines 2 and 3) to replace "multiplexing flow control signals" with —multiplexing a second flow control signal—.
- Claim 27 has been amended (at line 3) to replace "a receiver" with —the receiver—.
- Claim 30 has been amended (at line 10) to replace "in each channel" with —in each of the channels—.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 22 of 33

- Claims 33-36 have been amended (each at line 1) to replace "Apparatus" with --An apparatus--.

The Applicant has made a number of additional claim amendments for clarity. These additional amendments and all of the aforementioned amendments are submitted to be completely supported by the application as originally filed and to add no new matter.

Allowable subject matter

The Office Action indicates that claim 11 contains allowable subject matter and would be allowable if rewritten in independent form to incorporate the features of its base claim and any intervening claims. The Applicant has done this by amending claim 11 to incorporate the features of claims 8-10. Claim 11 has also been amended to address the informality objections raised by the Examiner in relation to claims 8-11 as discussed above. The Applicant submits that these additional amendments do not impact the scope of claim 11.

The Examiner has indicated that claim 18 is allowed. The Applicant has amended claim 18 to address informality objections raised by the Examiner as discussed above. The Applicant submits that these amendments do not impact the scope of claim 18.

In light of the above, claims 11 and 18 are submitted to be in condition for allowance.

Compliance of claims with 35 U.S.C. §112

The Examiner has raised 35 U.S.C. §112 in connection with claims 6, 7, 20-22 and 24-29. The Applicant submits that claims 6, 7, 20-22 and 24-29 (as amended) comply with 35 U.S.C. §112.

The Applicant has amended claim 6 as described above and submits that these amendments obviate the Examiner's objection based on a lack of antecedent basis for the phrase "the buffers". The Applicant submits that claim 6 (and claim 7 which depends from claim 6) comply with 35 U.S.C. §112.

The Applicant has amended claim 24 to replace "upon the transmission of cells in one of the channels being inhibited, waiting until the transmission of cells on the channel is not inhibited and then commencing the transmission of a cell an integer multiple ΔT after the time at which transmission of a previous cell commenced on the channel" with --upon inhibiting transmission of cells in the at least one of the channels: waiting without

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 23 of 33

transmission of cells in the at least one of the channels; and after waiting, recommencing transmission of cells in the at least one of the channels an integer multiple of the time difference ΔT after a time at which transmission of a previous cell commenced on the at least one of the channels--. The Applicant submits that when viewed in the context of the other claim 24 features, this amendment puts claim 24 into compliance with 35 U.S.C. §112. Claims 20-22 and 25-29 depend from claim 24 and are also submitted to comply with 35 U.S.C. §112.

Claims 1, 3-5 and 33-36

The Examiner has raised the combination of US patent No. 6,775,305 (Delvaux) and US patent No. 5,065,396 (Castellano et al.) in connection with claims 1, 3-5 and 33-36. The Applicant submits that claims 1, 3-5 and 33-36 patentably distinguish the combination of Delvaux and Castellano et al.

Delvaux discloses multi-channel communication links. Delvaux discloses, as background, inverse multiplexing for ATM (IMA) (col. 2, ln. 29-48).

As understood, Castellano et al. disclose an inverse multiplexer which demultiplexes a first data rate input signal into a plurality of second lower data rate subsectional signals. Each subsectional signal is provided with a periodic synchronization marker. The subsectional signals have a data rate that is a rational fraction of the data rate of a channel used to transmit the subsectional signals to a remote terminal. Programmable Multiplexers (PMUXs) map contiguously assigned time slots in a capacity domain frame for each subsectional signal to time slots of a time domain frame format for transmission of the subsectional signals over a channel to a remote terminal. At the remote terminal, an inverse demultiplexer performs the reverse operation to recover the original first data rate signal. Castellano et al. disclose one-way transmission of data from the inverse multiplexer to the remote terminal only. Castellano et al. do not teach or suggest transmission of receive enable signals (or any other signals) from the remote terminal back to the inverse multiplexer as means for controlling transmission of the subsectional signals from the inverse multiplexer to the remote terminal.

The Examiner correctly states at page 5 of the Office Action that Delvaux does not disclose "a first transmit control circuit" having the features recited in claim 1. The Applicant submits that Castellano et al. fail to remedy this deficiency.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 24 of 33

Claim 1 (as amended) recites a data transmission apparatus comprising "a plurality of data transmitting devices, each data transmission device associated with a corresponding one of the N sub-streams for serializing data from the corresponding one of the N sub-streams and transmitting the serialized data via a corresponding first serial data connection over said mid-plane to a data receive interface." This claim 1 feature clearly implies that the "data receive interface" is on the opposing side of the mid-plane from the data transmission apparatus. Claim 1 recites further, "a first transmit control circuit connected to the data transmitting devices and configured: ... to selectively enable and disable the data transmitting devices in response to first receiver enable signals received over said mid-plane from the data receive interface." Castellano et al. does not disclose this claim 1 feature.

On pages 5-6 of the Office Action, the Examiner expresses the view that Castellano et al. disclose a first transmit control circuit (Figure 6, reference SYNCH 12₄) configured to selectively enable and disable the data transmitting device in response to first receiver enable signals received over from the data receive interface (Figure 1, references PMUX13₁ - PMUX13₄) (col. 3 lines 63-68). Figures 1 and 6 of Castellano et al. clearly show that the alleged data receive interface (PMUX13₁ - PMUX13₄) is located within the data transmit device (i.e. inverse multiplexer (10)). Accordingly, these components of the Castellano et al. system cannot be the "data receive interface" recited in claim 1, because the claim 1 "data receive interface" is located on the opposing side of the mid-plane from the data transmit device. In addition, the directional arrows of Figures 1 and 6 clearly show that Castellano et al. teach only one way transmission from inverse multiplexer (10) to inverse multiplexer (20). Castellano et al. do not teach any rearward transmission from inverse demultiplexer 20 to inverse multiplexer 10. Accordingly, the Castellano et al. device has no capacity to permit "receiver enable signals" to be received "over the mid-plane from the data receive interface" as recited in claim 1. Furthermore, the alleged first transmit control unit (Castellano et al. synchronization unit (SYNCH 12₁-12₄)) only inserts markers into the subsectional signals and does not enable or disable data transmission as recited in claim 1.

For these reasons, the Applicant submits that neither the cited aspects of Castellano et al. nor any other aspect of Castellano et al. teach or suggest the claim 1 feature of a "a first transmit control circuit connected to the data transmitting devices and configured: ... to selectively enable and disable the data transmitting devices in response to first receiver enable signals received over said mid-plane from the data receive interface." Accordingly, Castellano et al. fail to remedy the aforementioned deficiency of Delvaux.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 25 of 33

Based on this reasoning, the Applicant submits that claim 1 patentably distinguishes the cited combination of Delveaux and Castellano et al. Claims 3-5 and 33-36 depend from claim 1 and are submitted to be patentable over the cited references for at least this reason.

Claims 6 and 7

The Examiner has raised the combination of Delvaux and Castellano et al. in connection with claims 6 and 7. The Applicant submits that claims 6 and 7 patentably distinguish the combination of Delvaux and Castellano et al.

The Examiner correctly states at page 9 of the Office Action that Delvaux does not disclose a "first transmit control circuit", a "first receive interface" or a "first receive control circuit" having the features recited in claim 6. The Applicant submits that Castellano et al. fail to remedy this deficiency.

Claim 6 recites "a first transmit control circuit ... configured to cause the data transmitting devices to output the transmit cells in sequence with commencement of transmission of the transmit cells from sequential data transmitting devices staggered in time relative to one another by a time difference ΔT ." Castellano et al. do not teach or suggest this aspect of claim 6.

On pages 9 and 10 of the Office Action, the Examiner expresses the view that Castellano et al. disclose a first transmit control circuit (Figure 6, reference SYNCH 12₄) connected to the data transmitting devices, the first transmit control circuit (Figure 6, reference SYNCH 12₄) configured to cause the transmitting devices to output the cells in sequence with the commencement of transmission of cells on sequential transmit channels staggered in time relative to one another by a time difference ΔT (col. 4 lines 8-14). Column 3, ln. 42 - col. 4, ln. 25 of Castellano et al. (which includes the cited passage) describes using a common clock signal to insert synchronization markers into the subsectional output signals before transmission thereof by PMUX (13₁-13₄) across corresponding channels (Ch. 1- Ch. 4). Inserting synchronization markers (as taught by Castellano et al.) impacts the content of subsectional output signals, not the commencement of transmission of cells as recited in claim 6. The Castellano et al. system requires these inserted markers to re-synchronize the subsectional signals at a receiver.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 26 of 33

In contrast to the Castellano et al. technique of inserting synchronization markers into subsectional signals to allow re-synchronization of the data at the receiver, claim 6 recites "a first transmit control circuit ... configured to cause the data transmitting devices to output the transmit cells in sequence with commencement of transmission of the transmit cells from sequential data transmitting devices staggered in time relative to one another by a time difference ΔT ." Castellano et al. does not teach or suggest this claim 6 feature. Staggering the commencement of transmission of cells in accordance with claim 6 ensures that cells will arrive at the receiver in order (i.e. no resequencing at the receiver is required).

Claim 6 also recites "a first receive interface comprising: a plurality of deserializer devices, each of the deserializer devices connected for receiving a corresponding serial stream of receive cells received over the mid-plane from the receiver; a plurality of buffers, each of the buffers connected to accept the receive cells from a corresponding one of the deserializer devices and each of the buffers having a capacity sufficient to hold a plurality of the receive cells; and a first receive control circuit ... configured to issue a flow control signal when any one of the buffers has a remaining capacity of Q cells, with $Q \geq 1$ and wherein the first transmit control circuit is configured to transmit the flow control signal with the transmit cells to the receiver." Castellano et al. do not disclose or suggest these aspects of claim 6.

On page 10 of the Office Action, the Examiner expresses the view that Castellano et al. disclose a receive control circuit (Figure 7, reference RESYNCH 24,) which is configured to issue a flow control signal when a buffer has a remaining capacity of Q cells (col. 9, ln. 11-65). RESYNCH 24, and the cited passage of Castellano et al. describe components on the receiver side of the Castellano et al. apparatus, whereas the "first receive interface" recited in claim 6 is on the same side of the mid-plane as the "first transmit interface". This is evident from the claim 6 feature of "a first receive interface comprising: a plurality of deserializer devices, each of the deserializer devices connected for receiving a corresponding serial stream of receive cells received over the mid-plane from the receiver." The Applicant submits that neither the cited passages or elements of Castellano et al. nor any other aspect of Castellano et al. disclose the claim 6 feature of a "transmit interface" and a "receive interface" on the same side of a mid-plane.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 27 of 33

In addition, neither the cited passages or elements of Castellano et al. nor any other aspect of Castellano et al. teach or suggest the claim 6 features of: a receive control circuit "configured to issue a flow control signal when any one of the buffers has a remaining capacity of Q cells, with $Q \geq 1$ "; and a first transmit control circuit "configured to transmit the flow control signal with the transmit cells to the receiver".

Accordingly, Castellano et al. do not disclose a "first transmit control circuit", a "first receive interface" or a "first receive control circuit" having the features recited in claim 6 and therefore fail to remedy the aforementioned deficiency of Delvaux.

Based on this reasoning, the Applicant submits that claim 6 patentably distinguishes the cited combination of Delvaux and Castellano et al. Claim 7 depends from claim 6 and is submitted to be patentable over the cited references for at least this reason.

Claims 8-10

The Examiner has raised the combination of Delvaux and Castellano et al. in connection with claims 8-10. The Applicant submits that claims 8-10 patentably distinguish the combination of Delvaux and Castellano et al.

The Examiner correctly states at page 12 of the Office Action that Delvaux does not disclose "a first transmit control circuit" having the features recited in claim 12. The Applicant submits that Castellano et al. fail to remedy this deficiency.

As discussed above in relation to claim 6, Castellano et al. fail to teach or suggest the claim 8 feature of "a first transmit control circuit ... configured to cause the data transmitting devices to output the transmit cells in sequence with commencement of transmission of the transmit cells from sequential data transmitting devices staggered in time relative to one another by a time difference ΔT ."

Accordingly, the Applicant submits that claim 8 patentably distinguishes the cited combination of Delvaux and Castellano et al. Claims 9 and 10 depend from claim 8 and are submitted to be patentable over the cited references for at least this reason.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 28 of 33

Claims 12 and 14-17

The Examiner has raised the combination of Delvaux and US patent No. 6,788,686 (Khotimsky et al.) in connection with claims 12 and 14-17. The Applicant submits that claims 12 and 14-17 patentably distinguish the combination of Delvaux and Khotimsky et al.

As understood, Khotimsky et al. disclose a method for restoring the original order of packets in an end-to-end data flow that has been transmitted over a set of paths. The Khotimsky et al. method involves performing packet block enumeration for pairs of paths. Khotimsky et al. indicate that differential delay ("skew") among the different paths can cause data segments to arrive out of order at a receiver. Khotimsky et al. describe a re-assembly engine (62) for re-establishing the sequence of the data signals at the receiver.

Claim 12 recites "means for carrying a data stream comprising a sequence of cells having an order; ... control means for commencing the transmission of individual cells to the receiver, in the order, at times staggered relative to one another by a time difference ΔT that exceeds a worst case inter-channel difference in latency for transmission of cells from the transmitting means to the receiver by way of the mid-plane; and receiving the cells in the order at the receiver." Neither Delvaux nor Khotimsky et al. disclose this combination of features.

On page 14 of the Office Action, the Examiner contends that Delvaux discloses "commencing further transmission of individual cells to the receiver, in the order, at times staggered relative to one another by a time difference ΔT that exceeds a worst case interchannel difference in latency for transmission of cells from the transmitting means to the receiver" at col. 19, ln. 10-15. This contention is erroneous.

The only whole sentence in the cited passage reads: "A more disturbing difference is that cell 6 163, on line 0 is sent before cell 5 163, on line 1, this should normally never happen except in a simplified model, but could happen in a real system with hidden variable delays between the output of the FIFO and transmission via the various lines." This cited disclosure from Delvaux clearly contemplates the possibility that transmission latency could cause transmission of cells out of order. This aspect of Delvaux is also shown in Figure 9, for example. Accordingly, this passage from Delvaux expressly teaches away from the claim 12 combination of "means for carrying a data stream comprising a sequence of cells

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 29 of 33

having an order" and "control means for commencing the transmission of individual cells to the receiver, in the order"

When the cells are transmitted out of order (as is permitted by Delvaux), the cells are not received in order at the receiver. Consequently, Delvaux also fails to teach or suggest the claim 12 feature of "receiving the cells in the order at the receiver."

Figure 9 of Delvaux clearly shows that consecutive cells are transmitted at different intervals. For example, Figure 9 shows that the interval between commencement of transmission of cell 163₂ and commencement of transmission of cell 163₃ is relatively short, whereas the interval between commencement of transmission of cell 163₁ and 163₂ is relatively long. In direct contrast to this teaching of Delvaux et al., claim 12 recites that commencement of transmission of individual cells to the receiver occurs "at times staggered relative to one another by a time difference ΔT that exceeds a worst case inter-channel difference in latency for transmission of cells from the transmitting means to the receiver by way of the mid-plane."

In addition, as correctly stated by the Examiner on page 15 of the Office Action, Delvaux does not disclose "control means for commencing the transmission of individual cells to the receiver."

The Applicant submits that Khotimsky et al. fail to remedy the above-noted deficiencies with Delvaux. On page 15 of the Office Action, the Examiner expresses the view that Khotimsky et al. disclose a control means at Figure 3, reference 40 and at col. 7, ln. 62 - col.8 ln. 63. In the cited passage, the Khotimsky et al. component reference numeral 40 is described as "a controller". However, Khotimsky et al. fail to teach or suggest other claim 12 features deficient from Delvaux. More particularly, Khotimsky et al. do not disclose the claim 12 features of:

- (i) "receiving the cells in the order at the receiver"; and
- (ii) "control means for commencing the transmission of individual cells to the receiver, in the order, at times staggered relative to one another by a time difference ΔT that exceeds a worst case inter-channel difference in latency for transmission of cells from the transmitting means to the receiver by way of the mid-plane".

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 30 of 33

Khotimsky et al. do not teach or suggest "receiving the cells in order at the receiver" as recited in claim 12. In direct contrast to this claim 12 feature, the Khotimsky et al. disclosure is completely concerned with a method for reestablishing the sequence order of cells received out of order at a receiver when such cells are transmitted over a multipath transmission system. Khotimsky et al. refer to reestablishing the sequence order of cells received at the receiver as "re-assembly of the data flow" and Khotimsky et al. use a "re-assembly engine". The invention as recited in claim 12 does not require such a re-assembly engine, because the cells are received in order at the receiver. The entire disclosure of Khotimsky et al. teaches away from the claim 12 feature "receiving the cells in order at the receiver".

Khotimsky et al. describe "differential delay (sometimes referred to as skew)" as being a source for different inter-channel propagation and processing delays (see col. 2, ln. 8-14, for example). The Khotimsky et al. disclosure is completely concerned with a method for reestablishing the sequence order of cells received out of order at a receiver after they experience such differential inter-channel delay. In contrast, claim 12 recites "control means for commencing the transmission of individual cells to the receiver, in the order, at times staggered relative to one another by a time difference ΔT that exceeds a worst case inter-channel difference in latency for transmission of cells from the transmitting means to the receiver by way of the mid-plane". Because of this claim 12 feature, cells are received in order at the receiver (even when they experience inter-channel latency). Accordingly, if Khotimsky et al. disclosed this feature of claim 12, there would be no need for the re-assembly engine and re-assembly techniques disclosed by Khotimsky et al..

Based on this reasoning, the Applicant submits that claim 12 patentably distinguishes the cited combination of Delvaux and Khotimsky et al. Claims 14-17 depend from claim 12 and are submitted to be allowable for at least this reason.

Claims 30-32

The Examiner has raised the combination of Delvaux and Khotimsky et al. in connection with claims 30-32. The Applicant submits that claims 30-32 patentably distinguish the combination of Delvaux and Khotimsky et al.

Claim 30 recites "receiving transmitted cells at the receiving device in the same order that the transmitted cells were transmitted from the transmitting device". As discussed above in relation to claim 12, neither Delvaux nor Khotimsky et al. disclose this feature.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 31 of 33

In direct contrast to this claim 30 feature, both Delvaux and Khotimsky et al. specifically require resequencing of transmitted data at the receiver. The need for resequencing at the receiver is expressly described by Delvaux in Figure 12 and in the accompanying description at col. 20, ln. 33-col. 21, ln. 26. The need for resequencing at the receiver is expressly described by Khotimsky et al. at col. 7, ln. 64 - col. 8, ln. 5, for example.

Claim 30 also recites "each of the channels having a recurring cell transmit time, the cell transmit times for successive channels staggered relative to one another by amounts exceeding any inter-channel differences in skew and latency." Neither Delvaux nor Khotimsky et al. appear to disclose this feature. If Delvaux or Khotimsky et al. disclosed this claim 30 feature, then their respective systems would not need to resequence cells at the receiver, because cells would reach the receiver in sequential order, even in the face of "inter-channel differences in skew and latency."

Based on this reasoning, the Applicant submits that claim 30 patentably distinguishes the combination of Delvaux and Khotimsky et al. Claims 31 and 32 depend from claim 30 and are submitted to be patentable over the combination of Delvaux and Khotimsky et al. for at least this reason.

Claims 20-22 and 24-29

The Examiner has raised the combination of Delvaux, Khotimsky et al. and US patent publication No. 2003/0016697 (Jordan) in relation to claims 20-22, 24, 25 and 27-29 and has raised the combination of Delvaux, Khotimsky et al., Jordan and US patent No. 6,647,019 (McKeown et al.) in connection with claim 26. The Applicant submits that claims 20-22, 24, 25 and 27-29 patentably distinguish the combination of Delvaux, Khotimsky et al. and Jordan and that claim 26 patentably distinguishes the combination of Delvaux, Khotimsky et al., Jordan and McKeown et al.

The Examiner correctly states at page 19 of the Office Action that Delvaux does not disclose the claim 24 feature of inhibiting the transmission of cells in at least one of the channels in response to receiving a flow control signal. The Applicant submits that neither Khotimsky et al. nor Jordan remedy this deficiency.

Claim 24 recites "inhibiting transmission of cells in at least one of the channels in response to receiving, at the transmitter, a first flow control signal issued from the receiver." None of the cited references disclose or suggest such a feature.

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 32 of 33

On page 19 of the Office Action, the Examiner expresses the view that Khotimsky et al. disclose inhibiting the transmission of cells in at least one of the channels in response to a flow control signal at col. 7, ln. 62-64. The only whole sentence in the cited passage of Khotimsky reads: "Dispatch engine 50 and subflow storage 52 together ensure the input controller functionality of controller 40 with respect to the given flow." The Applicant submits that the cited passage in no way supports the asserted disclosure. The Applicant further submits that nothing in Khotimsky et al. teaches or suggests "inhibiting transmission of cells in at least one of the channels in response to receiving, at the transmitter, a first flow control signal issued from the receiver" as recited in claim 24.

On page 20 of the Office Action, the Examiner expresses the view that Jordan discloses suspending transmission of cells on a channel by issuing a flow control signal (Figure 1, reference 120, page 4 paragraph [0041] line 14 and claim 29). Claim 29 of Jordan recites, *inter alia*, "a logic circuit connected to said idle bytes identifier and said buffer that can enable and disable writing of said first data into said buffer in response to a signal from said idle bytes identifier." The Applicant submits that the Jordan claim 29 feature of "a logic circuit ... that can enable and disable writing of said first data into said buffer" does not amount to the claim 24 feature of "inhibiting transmission of cells in at least one of the channels in response to receiving, at the transmitter, a first flow control signal issued from the receiver."

The Jordan write enable/disable signal (342) is described in paragraphs [0057] and [0058] and is shown schematically in Figure 1. Figure 1 clearly shows that the Jordan write enable/disable signal (342) is not "issued from the receiver" and then received "at the transmitter" and as recited in claim 24. The Jordan flow control signal (342) is issued, received and used in the same device. Furthermore, paragraphs [0057] and [0058] of Jordan describe how the Jordan write enable/disable signal (342) is directed towards suspending writing incoming serial data to a buffer, and not "inhibiting transmission of cells in at least one of the channels" as recited in claim 24.

Based on this reasoning, the Applicant submits that claim 24 patentably distinguishes the combination of Delvaux, Khotimsky et al. and Jordan. Claims 20-22 and 25-29 depend from claim 24 and are submitted to patentably distinguish the cited prior art for at least this reason.

AUG 17 2006

Application No. 09/988,940
Amendment dated 17 August 2006
Reply to Office Action dated 17 May 2006

Page 33 of 33

New Claims 37 and 38

The Applicant has added new claims 37 and 38 for which patent protection is sought. New claims 37 and 28 are submitted to be completely supported by the application as filed and to add no new matter.

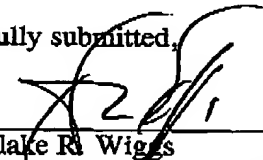
Conclusions

The Applicant submits that the claims, as amended, are in condition for allowance.

The Applicant requests reconsideration and allowance of this application in light of the foregoing amendments and remarks.

Respectfully submitted,

By:



Blake R. Wiggs
Registration No. 29,505
tel: 604.669.3432
fax: 604.681.4081
e-mail: TARdocket@patentable.com

Vancouver, B.C.
CANADA